

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

Precision Pump and Valve Service

West Virginia Manufacturing Extension Partnership

WVMEP Leads Precision Pump to Comprehensive Performance Improvements

Client Profile:

Precision Pump and Valve Service, Inc. (PPVS) is a third generation, family-owned and operated industrial service business. PPVS sells, installs, and services a wide range of industrial and municipal pumps and valves from multiple suppliers. They perform complete cleaning and rebuilding of these items in their shop, offer 24 hour 7 day a week emergency field service, and also standard field service and product replacement work. Their clients include but are not limited to large power generating stations, industrial chemical plants and municipal water and sewer operations. They employ 50 people and service companies in West Virginia, Virginia, Kentucky, Ohio and Pennsylvania, from the facility located in Cross Lanes, West Virginia, and also have a new facility in Louisville, KY, which services Western Kentucky and the Midwest.

Situation:

The West Virginia Manufacturing Extension Partnership (WVMEP), a NIST MEP network affiliate, provided an initial Lean implementation for PPVS several years ago. That effort resulted in improved plant layout and organization, increased productivity, and identification of future improvement opportunities. These opportunities were followed and progress was made on all fronts. As the business continued to grow and expand, improvement efforts slowed. After some time management began to notice some disturbing trends -- profit margins had decreased, productivity was decreasing slightly, lead times were increasing, and projects seemed to drag and never reach completion. WVMEP was again asked to work with the company to determine the root causes of these trends and help implement solutions.

Solution:

WVMEP consultants met with the management team of PPVS to discuss their concerns and develop a scope that properly described the issues. After this process, it was decided that a benchmarking activity needed to be conducted to determine how PPVS compared to national competition and to identify if those companies were experiencing similar issues, or if these were just internal issues facing PPVS. The benchmarking was conducted using Quick View and Performance Benchmarking assessments. The assessments pointed out many areas small and large that needed addressed. Based on the results of the assessments and knowledge of the company's business model and procedures, there were three main recommendations to the client. One of the key weaknesses identified by the benchmarking process was a lack of systems and lack of consistency with existing systems and procedures. It was recommended to implement an ISO type quality program to address the many issues with systems, documentation, procedures and overall quality. The second recommendation was to develop a long term strategic plan. PPVS lacked an official, written, long term strategic plan to document the company's vision and direction. The third recommendation was to re-start the Lean Continuous Improvement program through some specific on site projects facilitated by the WVMEP, including 5S (Sort, Set in Order, Shine, Standardize, Sustain) activity and a new Value

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Stream Mapping (VSM) activity for the pump shop portion of the business.

The benchmarking project pointed out 32 weaknesses within the company's business system which could be addressed within the framework of the three recommendations. A full ISO style quality program was developed with procedures, work instructions, documents, etc in place for all required ISO sections. Two on-site 5S programs were conducted which trained an additional 12 people and improved two additional areas. PPVS worked several months on developing a strategic plan to address the company's mission and vision as well as practical improvement items. A two-day VSM activity was conducted for a second time in the pump rebuild area. This activity resulted in an action list with 30 items covering administrative and shop issues. The following items have now been implemented: 1) a quoting and estimating process which keeps all data and specifications in one document and reduces redundant approvals before being sent to the customer; 2) a new repair/rebuild process for each specific type of pump. Previously this information was not captured on paper but relied only on worker experience, resulting in increased defects, reworks, and warranty claims; 3) the purchase of new equipment to improve shop and worker flexibility, customer response time, and address quality issues.

Results:

- * Improved quality for all product lines by 5 percent.
- * Improved quality for pump repair process by 5.8 percent.
- * Invested \$60,000 in new equipment.

Testimonial:

"We here at Precision are grateful for the lessons learned under the guidance of WVMEP. Our company has bought in to the concepts of Lean implementation, based in large part on the hands-on teaching methods utilized by the folks at WVMEP. Our entire workforce, and especially our labor force, has taken the lead on improving our company by applying Lean concepts taught by WVMEP. We look forward to working with WVMEP on our continuing efforts to improve profitability by eliminating waste and providing a better value to our customers."

Kevin Kemerer, Vice President